university sector; and (3) declining interests of students to pursue science. Universities are the mainstay of scientific research all over the world, but, in our country, universities have been suffering because of a variety of financial and government problems leading to, among other things, depletion of faculty, impoverishment of research infrastructure and lack of opportunities for the faculty for updating their knowledge. Most universities fall in the domain of State Government and they need to address the problem urgently.

(c) The Government of India, on its part, has taken a number of steps to rejuvenate and promote scientific research. The Plan Allocation of scientific departments has been doubled from about Rs. 12000 crores in the IX Plan to about Rs. 25000 crores in the X Plan and it is planned to increase it further in the XI Plan with special focus on massive rejuvenation of science in the university system along with a new scheme for promoting Innovation in Science Pursuit for Inspired Research (INSPIRE). The Research Infrastructure programme of DST in a targeted programme to upgrade the laboratory infastructure in universities and other higher educational institutions. Several institutions, centres of excellence and facilities in emerging and frontline areas have also been established; for example, in the areas of Brain Research, Marine Biotechnology, Stem Cell and Tissue Engineering, Soft Computing, Water Resources Development, Nanophosphors, Display Technology, Fuel Cell Technology, Ultrafast Processes, Protein Research, etc. More recently, three new Indian Institutes of Science Education and Research (IISERs) have been set up at Kolkata, Pune and Chandigarh which, apart from carrying out frontline and internationally competititve research, would ofter M.Sc. Programmes in a multi-disciplinary and academically flexible and research-oriented environment. Various agencies of Government of India have now attractive scholarship, fellowship and research support schemes for scientific manpower of all ages starting right from the school level.

Nanotechnology in the country

2066. SHRI THANGA TAMIL SELVAN: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) the advantages of using nanotechnology in the country;

(b) the areas where this technology is being used as of now; and

(c) the steps taken to promote use of this technology?

THE MINISTER OF SCIENCE AND TECHNOLOGY (SHRI KAPIL SIBAL): (a) to (c) Nanotechnology promises potential advantages to our country in prominent sectors like agricultural productivity; water treatment, disease diagnosis/screening; medicine including drug delivery systems; electronic devices; textiles; automobiles; etc. The areas where this technology is being used include nanomaterials for automotive applications, tuberculosis (TB) diagnosis kit based on nano-sized biosensors, etc.

Various Ministries/Departments such as Department of Science and Technology (DST), Defence Research and Development Organization (DRDO), Council of Scientific and Industrial Research (CSIR) and Department of Biotechnology (DBT) have been supporting R&D and research facilities in Nanoscience and technology. DST launched a national programme titled "Nano Science and Technology Initiative (NSTI)' in October 2001. The programme focuses at research and development in nanoscience and technology in a comprehensive manner so that India can become a significant player in the area and contribute to the development of new technologies besides carrying out basic research at the frontiers of knowledge. The programme supports R&D projects, strengthening of characterization and infrastructural facilities, creation of centres of excellence, generation of trained manpower, linkage between educational institutions and industry for application development etc. The Government is embarking on plans for a Nano Science and Technology Mission (Nano Mission) to further intensify its efforts to promote the upcoming area of Nano Science and Technlogy. It is planned to launch a variety of educational and HRD programmes, R&D programmes, establish centres of excellence, promote institution-industry linked projects through increased public private partnerships, promoting entrepreneurship through establishment of business incubators, etc. as part of the Nano Mission. The Nano Mission also plans to put in special efforts towards development and commercialization of nano technology, not only through public private partnerships but also by encouraging and enabling the private sector to invest in, and leverage, this sunrise technology.